

Utah Weekly Pertussis Update

2018 data, through MMWR week ending October 6, 2018 (MMWR week 40)

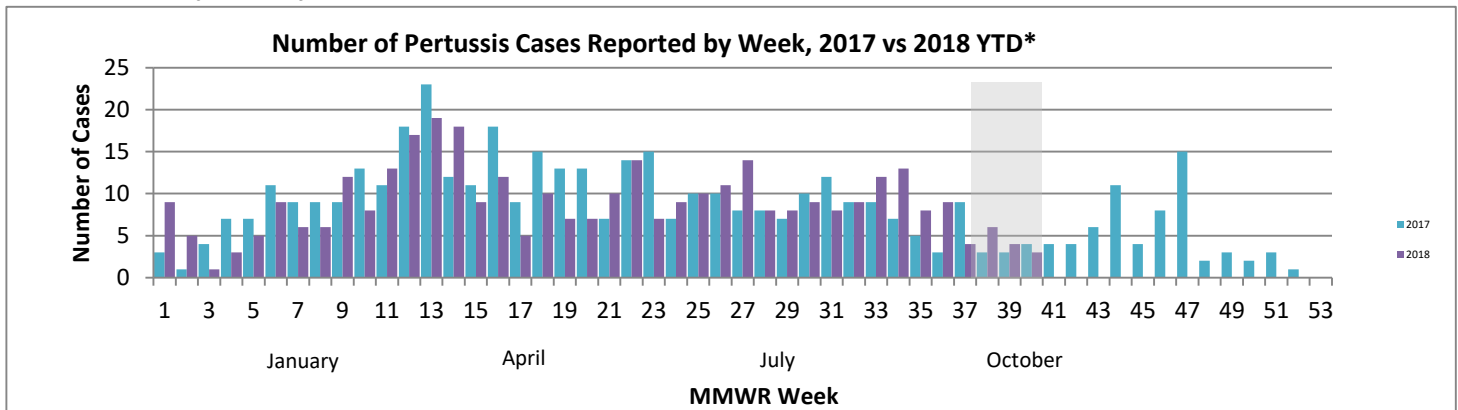
Data presented in this report are based on current data available and will be subject to change weekly.

Data Summary

| | | | |
|---------------------------------------------------------------|---------|-----------------------------------------------------------------------|------|
| Total number of cases reported, 2018 year-to-date (YTD) | 357 | Utah Incidence rate, 2018 year-to-date (YTD) per 100,000 person-years | 15.4 |
| Total number of cases reported 2017 | 439 | Utah Incidence rate, 2017 per 100,000 person-years | 14.6 |
| Number of cases reported in past week | 3 | National Incidence rate*, 2016 per 100,000 person-years. | 4.7 |
| Total number of cases reported, through same time period 2017 | 369 | 2018 Hospitalizations | 14 |
| Age groups with the highest rates | <1 | 2018 Cases in infants <1 year | 26 |
| | 15 - 24 | | |

*National Incidence Rate is updated as released by the Centers for Disease Control and Prevention.

Number of cases reported by week



*Additional cases may have occurred, especially in the most recent 3 weeks that have not yet been reported, as indicated by the grayed out section of the graph above.

2018 Year-to-Date Incidence Rates, By Age

| Age (years) | 2018 Cases | 2016 population | Rate* |
|-------------|------------|-----------------|-------|
| <1 | 26 | 51,162 | 66.7 |
| 1-4 | 41 | 202,288 | 26.6 |
| 5-14 | 87 | 520,247 | 22.0 |
| 15-24 | 96 | 491,359 | 25.7 |
| 25-34 | 19 | 448,845 | 5.6 |
| 35-44 | 36 | 410,933 | 11.5 |
| 45-54 | 26 | 314,060 | 10.9 |
| 55-64 | 8 | 291,159 | 3.6 |
| 65+ | 17 | 321,164 | 6.9 |
| Unknown | 1 | - | - |
| Total | 357 | 3,051,217 | 15.4 |

* Rate is calculated per 100,000 person years.

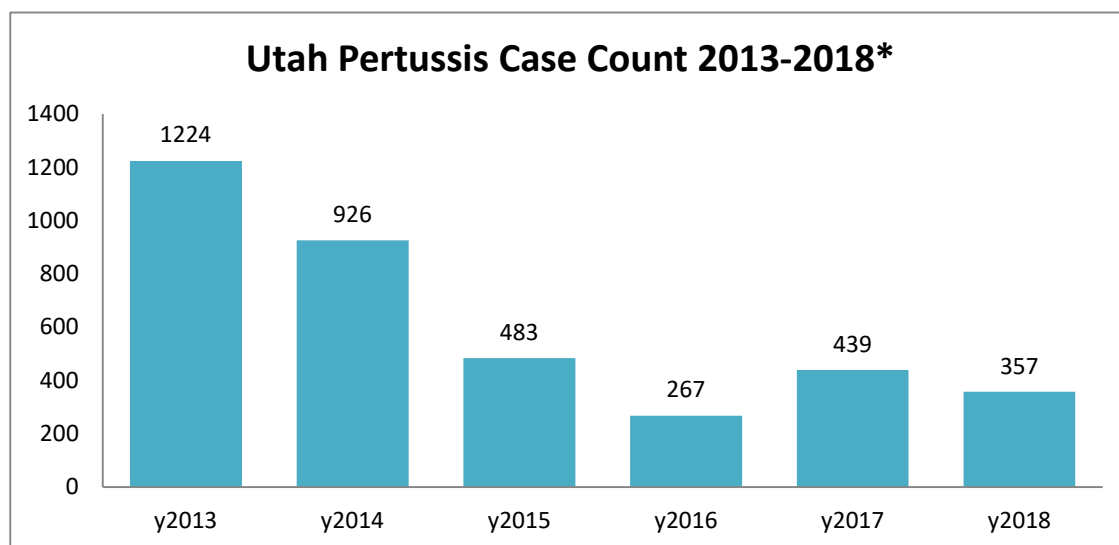
Infants less than 1 year of age have historically had the highest incidence rates of pertussis due to their susceptibility.

School Age Incidence Rates, 2018 Year-to-Date

| Grade | Age (years) | 2018 Cases | 2016 Population | Rate* |
|--------------|-------------|------------|-----------------|-------|
| Preschool | 3-4 | 12 | 100,804 | 15.6 |
| Kindergarten | 5 | 7 | 50,541 | 18.2 |
| 1 | 6 | 8 | 52,444 | 20.0 |
| 2 | 7 | 6 | 52,797 | 14.9 |
| 3 | 8 | 9 | 53,837 | 21.9 |
| 4 | 9 | 7 | 53,515 | 17.2 |
| 5 | 10 | 13 | 52,433 | 32.6 |
| 6 | 11 | 8 | 52,420 | 20.0 |
| 7 | 12 | 9 | 51,616 | 22.9 |
| 8 | 13 | 9 | 51,136 | 23.1 |
| 9 | 14 | 11 | 49,508 | 29.2 |
| 10 | 15 | 23 | 49,763 | 60.7 |
| 11 | 16 | 32 | 49,882 | 84.2 |
| 12 | 17 | 18 | 48,431 | 48.8 |

* Rate is calculated per 100,000 person-years. School age incidence rates were calculated using the average age of a student in each grade. High incidence rates in 5th and 6th grade may be due to waning immunity.

Utah Case Counts of Pertussis, 2013-2018* Year to Date



Pertussis tends to be cyclical. Reports have increased in Utah since 2010, peaked in 2012, and are currently trending downward.

* 2018 data includes pertussis cases reported year to date. 2013-2017 data reflects cases reported during the entire calendar year for each year.

Incidence of Pertussis by Local Health Department, 2018 YTD

| Local Health Department | 2018 Cases | Rate* |
|-------------------------|------------|-------|
| Bear River | 28 | 20.6 |
| Central Utah | 1 | 1.7 |
| Davis County | 34 | 13.0 |
| Salt Lake County | 142 | 16.6 |
| San Juan County | 1 | 7.8 |
| Southeast Utah | 2 | 6.5 |
| Southwest Utah | 9 | 5.2 |
| Summit County | 3 | 9.8 |
| Tooele County | 2 | 4.1 |
| TriCounty | 1 | 2.3 |
| Utah County | 89 | 19.7 |
| Wasatch County | 4 | 17.2 |
| Weber-Morgan | 42 | 21.3 |

* Rate is calculated per 100,000 person-years using 2016 Utah population estimates.

